

mod. 1962

Vespa 150

OPERATION AND MAINTENANCE

STABILIMENTO DI PONTEDERA

UFFICIO TECNICO SERIE

Dis. 88356 M
2 a EDIZIONE, 600016102

Printed in Italy



Fig. 1 – Vespa 150

NOTICE

To keep your VESPA in perfect running order and not to invalidate the guarantee offered by the contract, it is advisable to entrust repairs only to retailers or authorized service stations.

Demand original **Piaggio** spare parts exclusively. All PIAGGIO spares are made of the same material, have undergone the same machining steps and inspections as the components of your VESPA. This means guarantee for long life and normal performance of your machine and for your personal safety.

Special care should be taken with regard to fuel mixture which should consist of a good quality gasoline and oil of make, grade and in the amount prescribed in this booklet, page 21.

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INTRODUCTORY NOTE

The « Piaggio Co. » welcoming you in the family of the Vespa owners, wishes to thank you for your preference, trusting that this scooter will be to your satisfaction. For its characteristics (comfort, low fuel consumption, noiseless running, neatness etc.) the Vespa can have a large field of use: for work purpose as well as tourist trips, both along large highways and narrow farm roads.

Long and hard rides will not worry you and, on driving the Vespa, you will soon realize its excellent performance.

This booklet, in which the simple instructions for operation and maintenance can be found, will enable you to better know your Vespa and use it in the most suitable way.

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TECHNICAL DATA

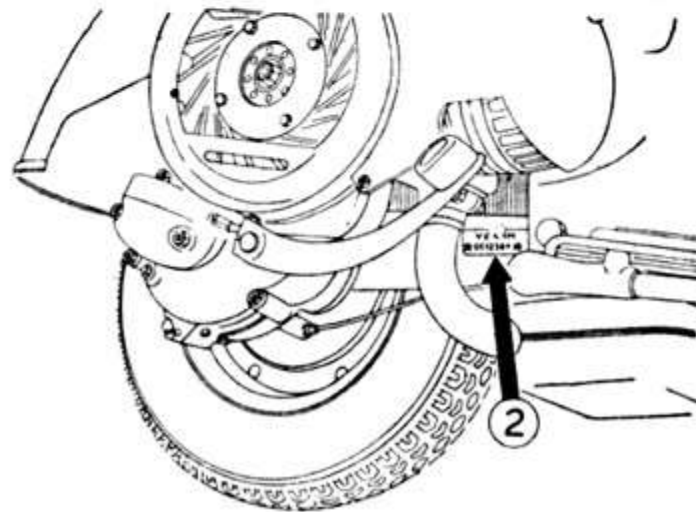
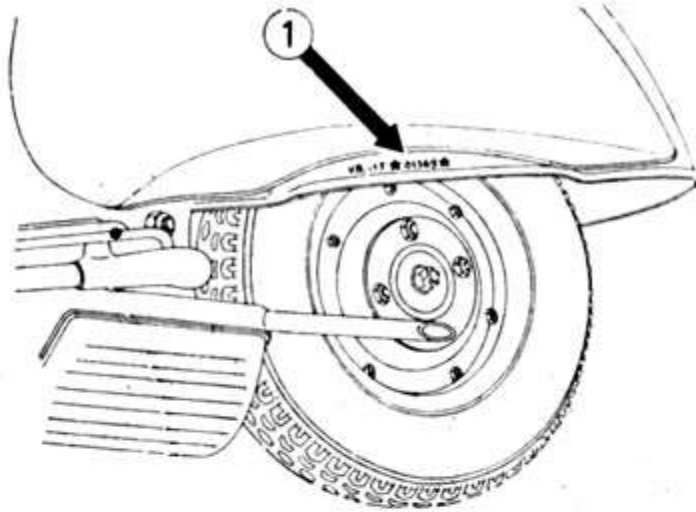


Fig. 2 & 3: - Stamping on frame (1) – Stamping on engine (2)

Fuel consumption (CUNA Standards)

2.2 liters to 100 Km (107 miles per USA gal ; 128 miles per imp. gal).

Max speed (CUNA)

85 Km "h (53 m.p.h.)

Carrying capacity

2 persons and 10 Kg. (22 lbs) of luggage.

Range	360 Km (225 miles)	Wheel base	1180 mm (46.4")
Handlebar width	710 mm (27.9")	Max length	1745 mm (68.7")
Max height	1020 mm (40.1 ")	Ground clearance	130 mm (5.1 ")
Min. turning circle	1500 mm (59")	Weight (without fuel)	87 Kg (194 lbs)

IDENTIFICATION DATA

Serial numbers with prefix VBB are stamped on both frame and engine in the positions indicated on Figs. 2 and 3 respectively.

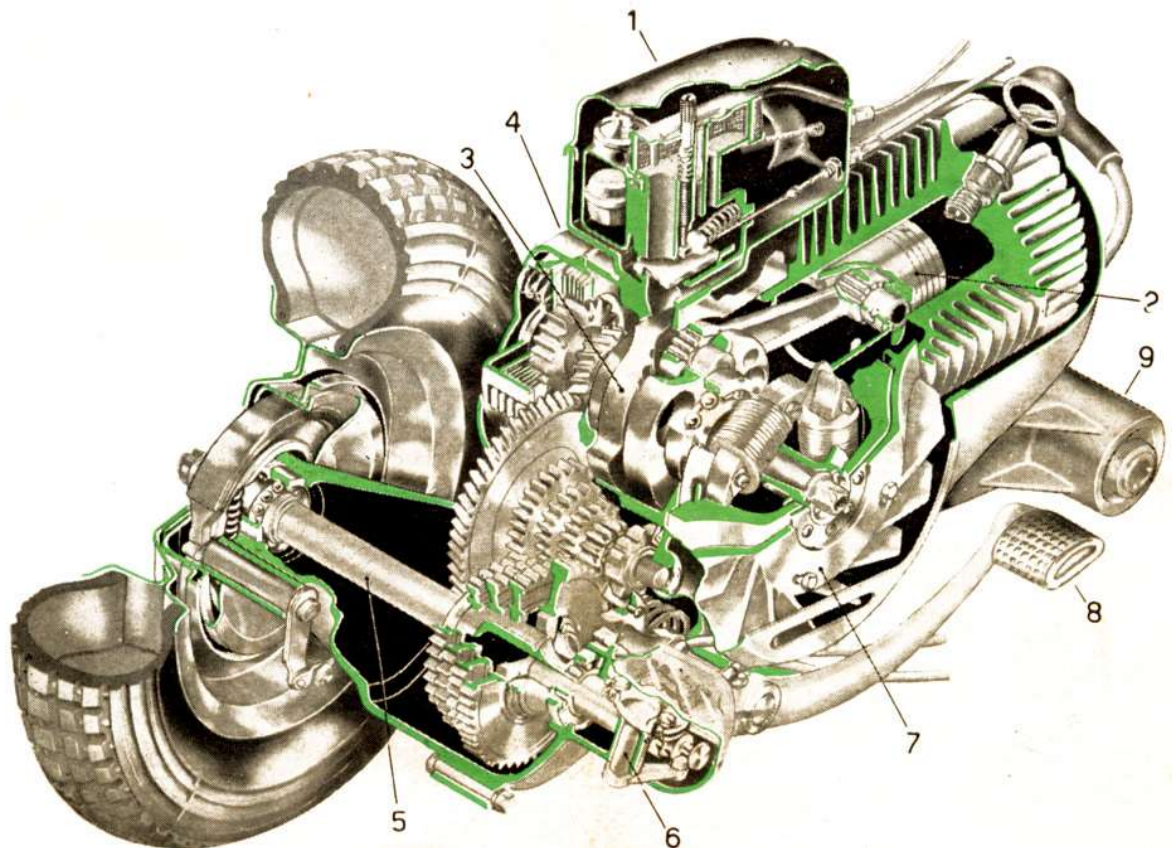


Fig. 4 – Section of engine

1. Air cleaner and carburettor - 2. Piston - 3. Crank shaft - 4. Clutch - 5. Mainshaft with gear pinions - 6. Gear shifter - 7. Flywheel magneto - 8. Kick-starter - 9. Crankcase arm (clutch side), pivoted to the frame.

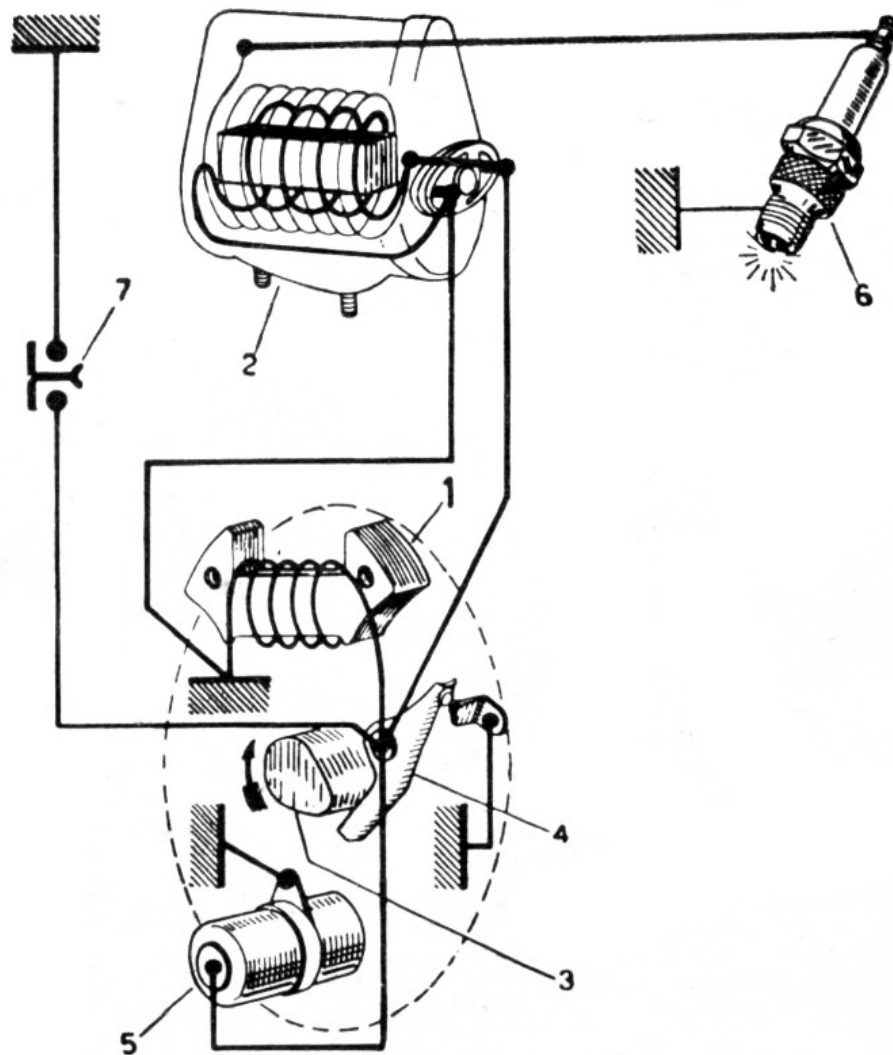


Fig. 5 - Ignition diagram

1. Ignition coil in flywheel magneto - 2. External H. T. coil - 3. Rotor cam - 4. Breaker - 5. Condenser - 6. Sparkplug - 7. Engine cut-out on switch.

Such numbers and prefixes identify the Vespa as prescribed by law and are repeated on the test card and other documents of the Vespa. They must be quoted when ordering spares.

ENGINE

Single horizontal cylinder, two-stroke, with deflector piston and rotary valve, i. e.: fuel mixture flow to the cylinder is controlled by the rotation of a crankweb (see Fig. 4).

The engine works on a 2% gasoline-oil mixture.

Bore	57 mm (2.24")
Stroke	57 mm (2.24")
Displacement	145.45 cc (8.88 cu.in)
Compression ratio	6.8 to 1 .

The engine is pivoted to the chassis of scooter through the cylindrical arm of the crankcase half, clutch side, provided with a spindle and two bushes (see Fig. 4). Its vibrations are damped by the rear suspension with variable rate coil spring and hydraulic damper (see also page 13). The rear wheel is secured to the end of the mainshaft.

Ignition by an external H. T. coil with primary winding fed by another coil inside the flywheel magneto (see Fig. 5).

Sparkplug: Marelli CW 230 A - T or CW 225 N - T, AC 43 F, Champion L. 86, Bosch W 225 T 1. - KLG F 70 or F 75.

Ignition timing with spark advance of $28^{\circ} \pm 10$.

Lubrication of piston, cylinder, wrist pin, connecting rod, crankshaft, main bearings is attended to by the oil in the fuel mixture.

Both clutch and gear box operate in oil bath.

Fuel supply by gravity with gasoline-oil mixture. The carburettor is embodied in the air cleaner case, has a plate-shaped slide valve and immersed jets.

Fuel tank with total capacity of 7.7 liters (2.03 USA gals; 1.7 imp. gals) and emergency reserve of about 1.4 l (0.37 USA gals; 0.3 imp. gals).

Three way tap («off» - «on» - «reserve»).

Transmission. The engine (see Fig. 4) directly drives the rear wheel through clutch, cush drive and gear box.

Engine to wheel transmission ratios:

First :	13.35 to 1
Second :	9.32 to 1
Third :	6.64 to 1
Fourth :	4.73 to 1

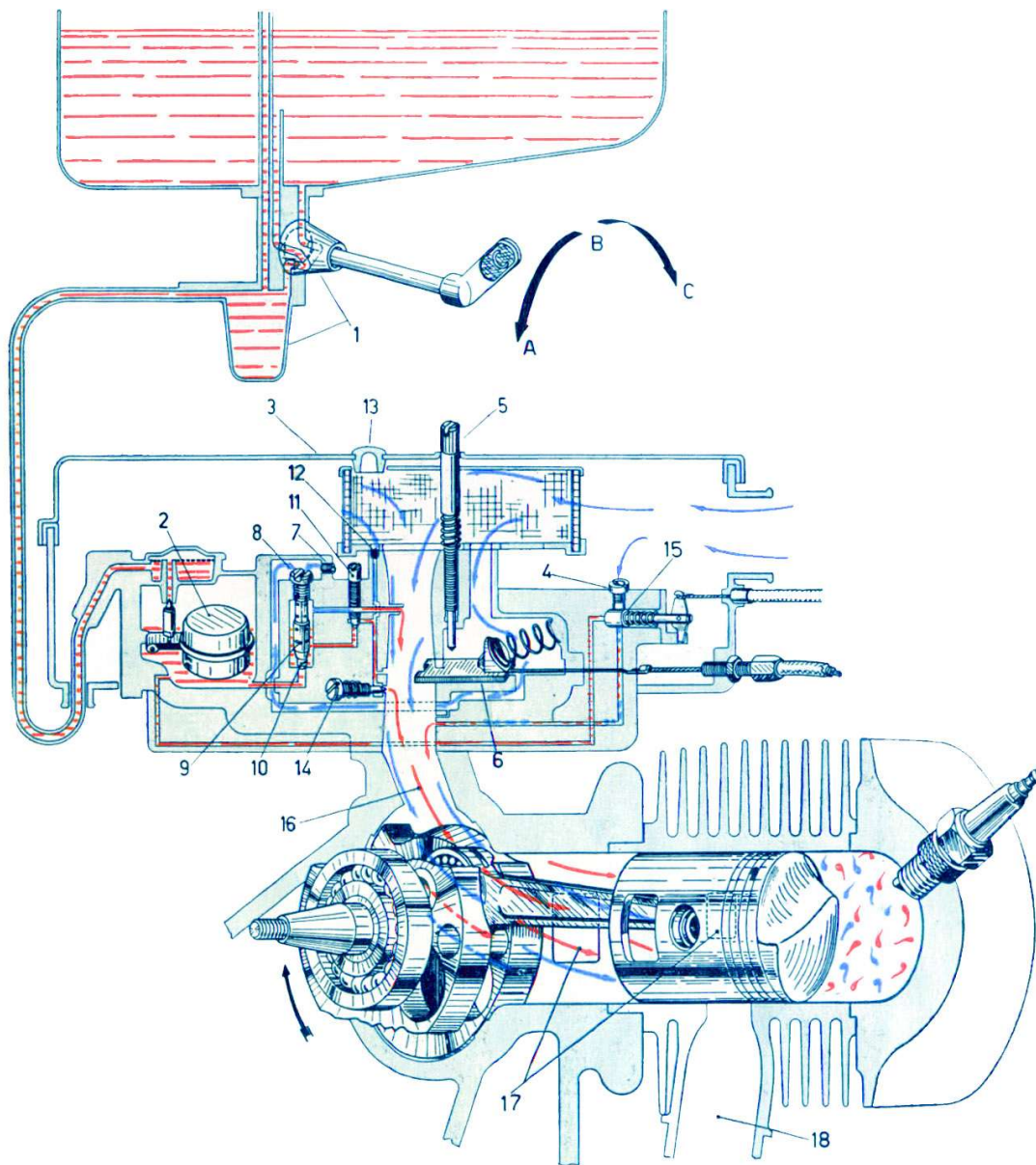


Fig. 6 - Feeding circuit

1. Fuel cock lever with sediment trap: A) Reserve, B) Open, C) Closed - 2. Float - 3. Air cleaner with carburettor - 4. Air vent for starter device - 5. Set screw for throttle slide - 6. Throttle slide - 7. Air vent for main jet - 8. Hole on mixer top - 9. Mixer - 10. Main jet - 11. Idling jet - 12. Air vent for idling jet - 13. Plug for inlet hole for oil; for laying up. - 14. Idling adjuster - 15. Valve for starter device - 16. Intake port - 17. Transfer ports - 18. Exhaust duct.

Clutch. Multiplate, with linings bonded to the driving discs (see Fig. 4). Control by lever, on left hand side of handlebars (see Fig. 8), and adjustable cable.

Gear box. 4-speed drive with mesh gears in oil bath (see Fig. 15). Its adjustable twistgrip control is coupled

with that of the clutch, on left hand side of handlebars (see Fig. 8).

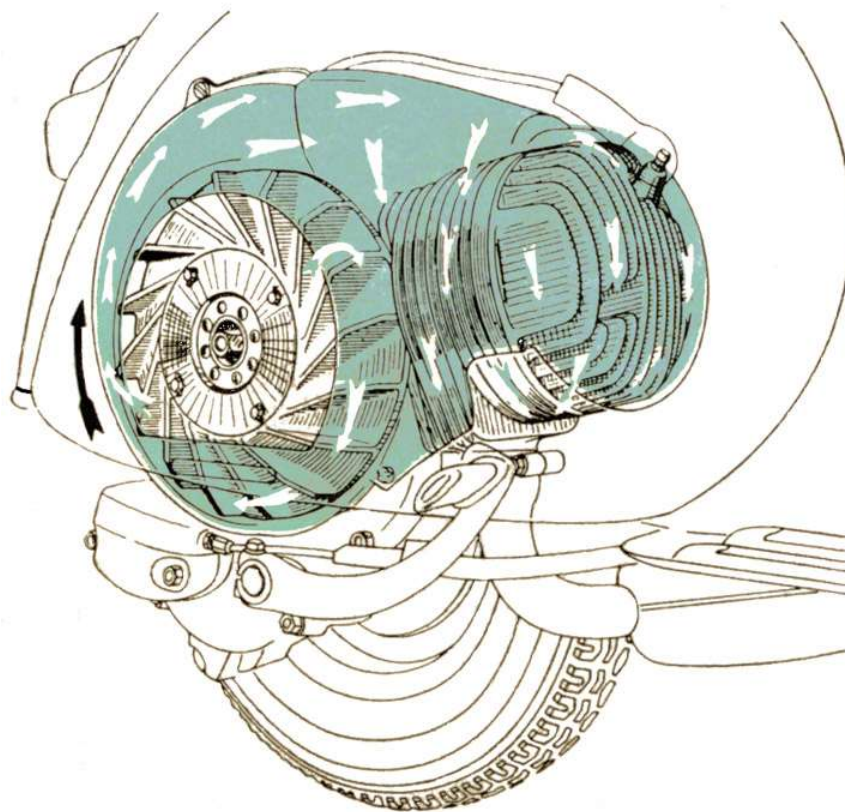
Starting. By means of kick-starter, right hand side of scooter. The multiple gear and consequently the engine is set in motion through a ratchet sector and a gear by operating the kick-starter.

Cooling effected at all engine speeds by a centrifugal fan (see Fig. 7).

Muffler. Expansion and absorption combined type with very high silencing efficiency.

Air cleaner mounted inside the body. Air goes to the carburettor through a large flexible inlet tube, a silencing chamber and porous filter, which ensures a very quiet air intake.

We recommend not to alter the muffler or the air cleaner but to keep them in perfect efficiency, in order that the noise level does not exceed the limits (prescribed by law.)



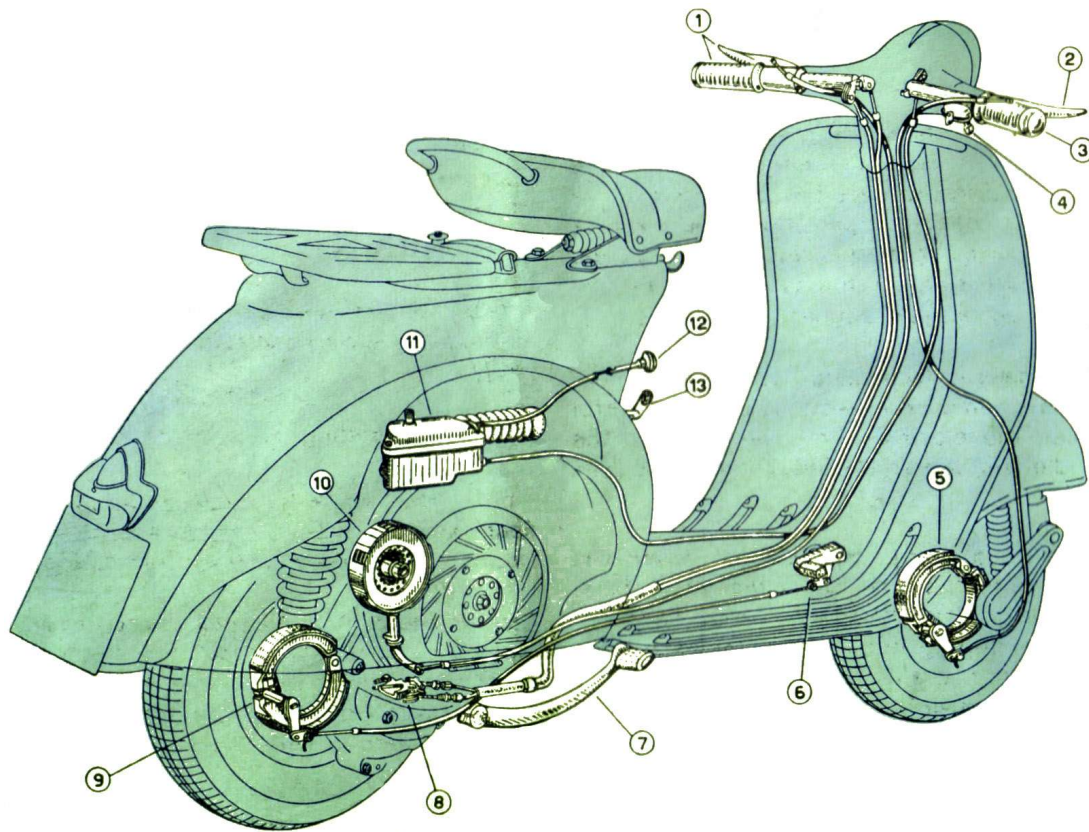


Fig. 8 VESPA controls

1. Gear change twistgrip with clutch control lever - 2. Front brake lever - 3. Throttle control grip - 4. Light and dip switch - 5. Front brake shoes - 6. Rear brake pedal - 7. Kick-starter - 8. Gear shifter - 9. Rear brake shoes - 10. Clutch - 11. Carburettor, air cleaner - 12. Starter device control lever - 13. Fuel tap.

FRAME

Stressed skin body of pressed steel sheet, (see Fig. 1), with streamlined, monocoque type structure. It gives full protection to the driver, to the passenger and to the machine units; it is completed in this function by the mudguard and, on the two sides, by the steel sheet engine bonnet and tool box.

Handlebars in light alloy, with arrangement for head lamp and speedometer. All control cables and electric wires, connected to the handlebars, are concealed inside them (see Fig. 8).

Steering column, suspension and wheels. The steering column bears the handlebars, clamped on its top end, and the front wheel swinging hub, pivoted at its bottom end through a stub axle (see Fig. 9).

Front suspension with variable rate coil spring and double action hydraulic damper.

Rear suspension: swinging bracket for engine and rear wheel, variable rate coil spring and coaxial, double action hydraulic tamper.

- *The wheels are interchangeable with rims of pressed steel sheet (0 8").*
- *Tyres of dia. 3.40-8".*

Saddle of the nose-pivoted, sprung type with central spring adjustable to the driver's weight.

Brakes. Expanding type with cable control.

Front: lever on R. H. side of handlebars.

Rear: control pedal on floorboard, R. H. Drums in light alloy with cooling fins.

Central stand. A two-legged stand, easy to operate, is arranged under the floorboard. A strong return spring in the middle holds it in contact with the floorboard and keeps it from vibrating while the scooter is being ridden.

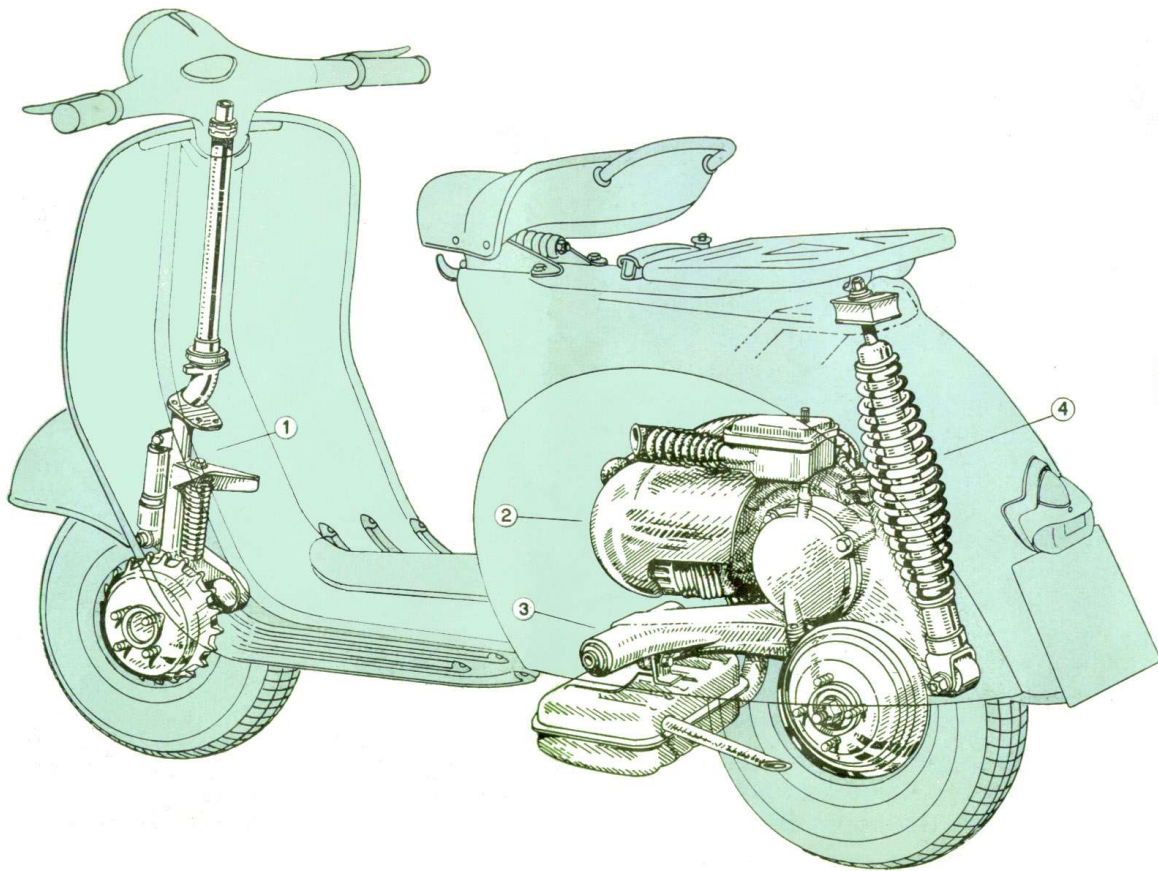


Fig. 9 – Engine and suspension

1. Steering column and front suspension – 2. Engine – 3. Pivoting arm of crankcase half, clutch side – 4. Rear suspension spring and hydraulic shock absorber

Steering lock. A suitable security lock is arranged on the frame, near the handlebars. Turning the key anticlockwise and the handlebars to the left, the lock engages the lugs welded on the steering column, so that the machine can only turn around. Turn the key clockwise for releasing the steering system (see Fig. 10).

We recommend not to lubricate the steering lock, even if it does not function properly. Do not attempt to ride the machine unless the key is in, and remains in, the lock and the handlebars move freely.

Speedometer. The speedometer is housed in the central portion of the handlebars (see Fig. 10) and adds to the appearance of the scooter. It is driven by the front wheel, the flex drive being completely enclosed in the steering column. The speedometer dial is lit during night riding by a bulb suitably installed in the head lamp.

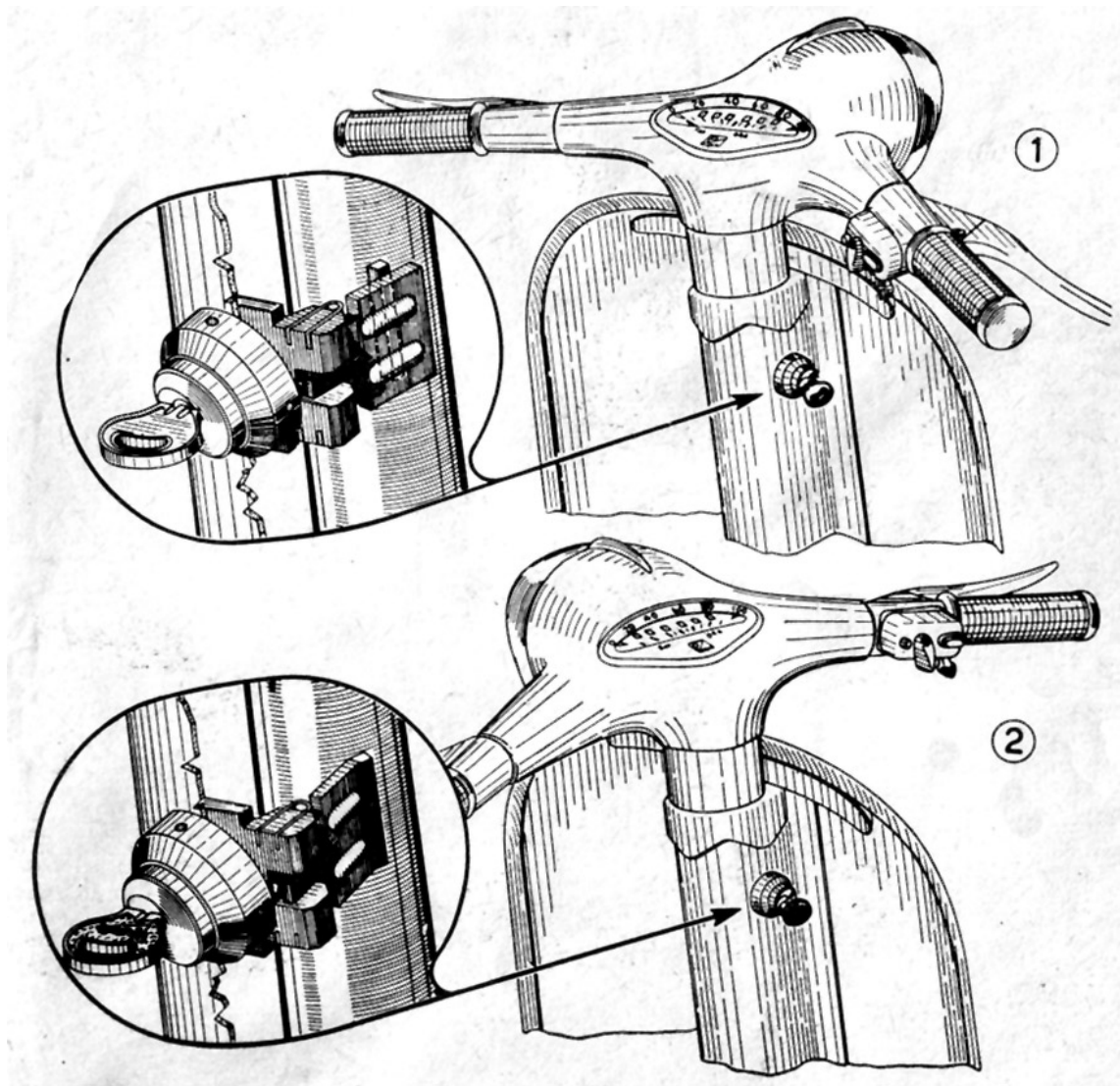


Fig. 10 – Security lock
1. Normal position – 2. closed

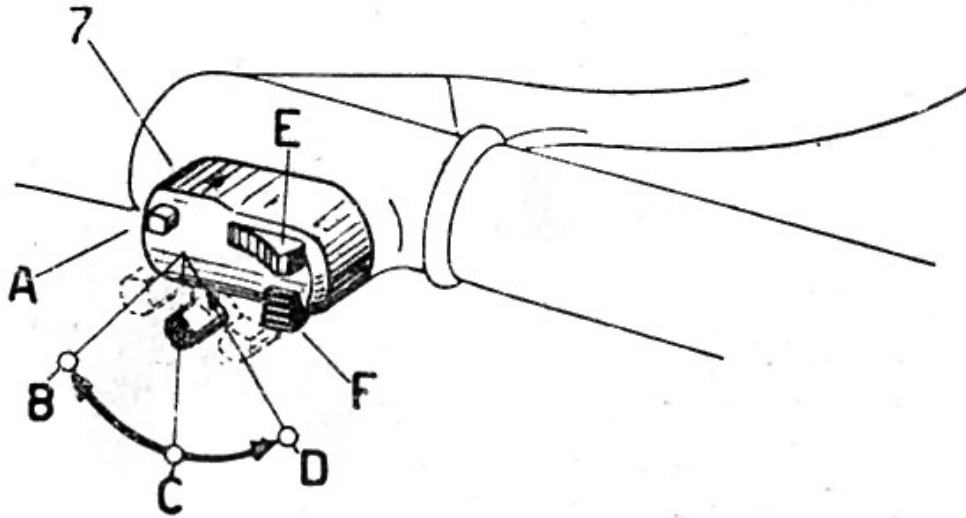


Fig. 11 – Handlebar switch

A – Engine cut-out B. Parking lights and speedometer bulb on – C. Lights off – D. Head lamp, tail lamp speedometer bulb on – E. Dip switch – F. Horn button - 7. Main switch

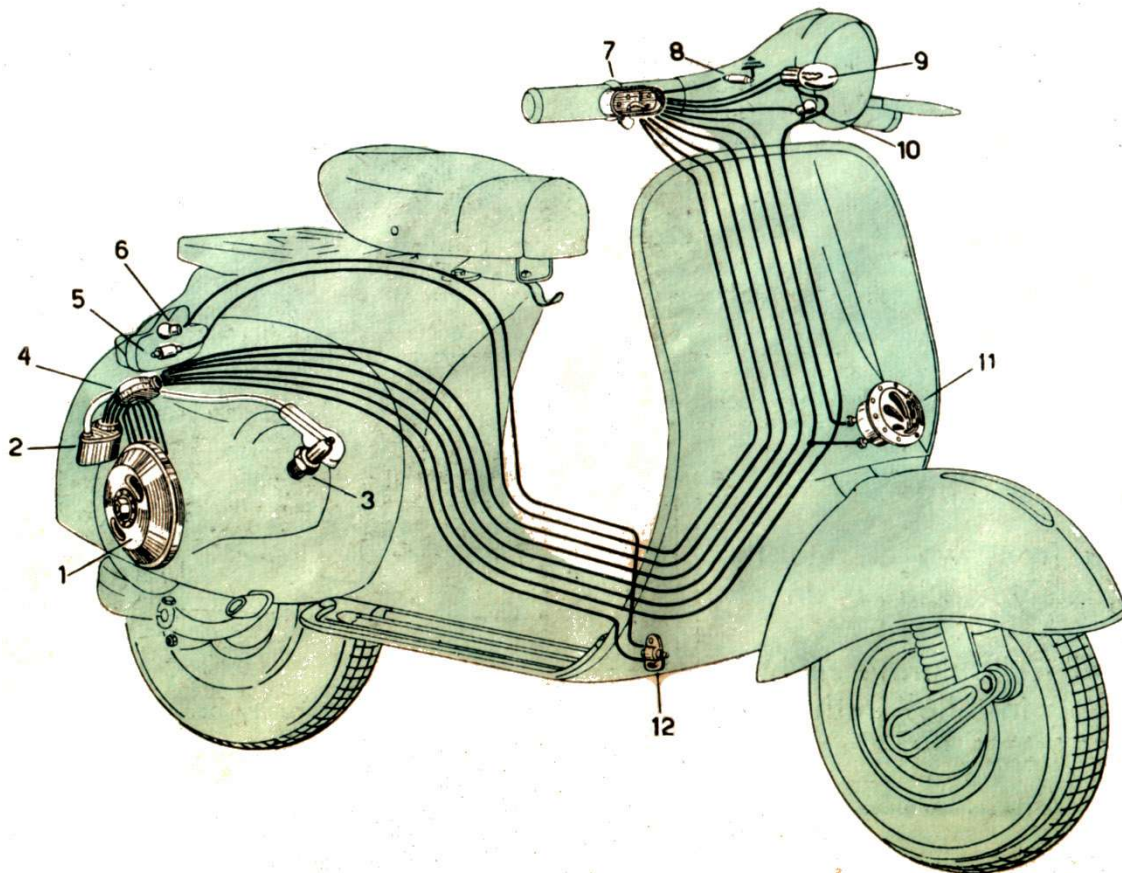


Fig. 11A – Cables & harness

1. Flywheel magneto - 2. External ignition coil - 3. Sparkplug - 4. Low tension terminal - 5. Tail lamp 16V-3W - 6. (STOP light - 6V-3W) - 7. Main switch - 8. Speedometer bulb (6V-0.6W) - 9. Double filament bulb (6V25/25W) - 10. Pilot light 6V-3W - 11. Horn - 12. STOP light switch - 13. Inside view of head lamp - 14. Black - 15. Red - 16. Grey - 17. Black-yellow - 18. Yellow - 19. White - 20. Sky blue - 21. Green - 22. Violet - 23. Brown.

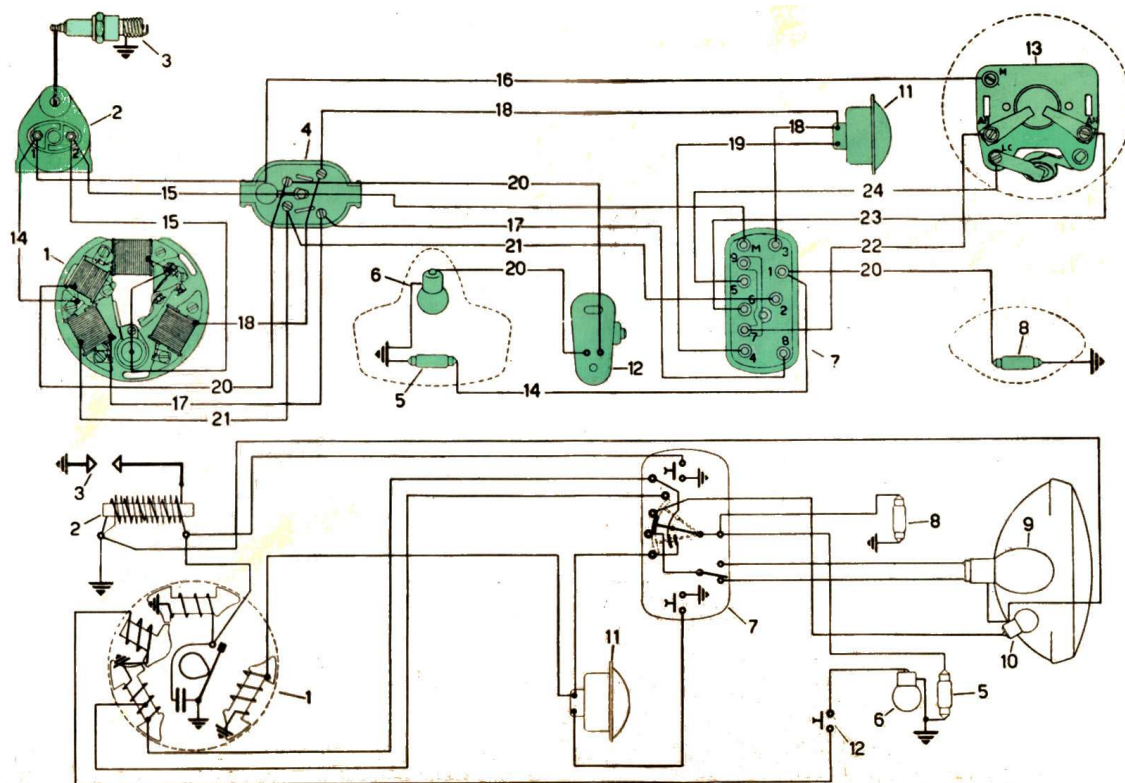


Fig. 12 – Electric wiring diagram

1. Flywheel magneto - 2. External ignition coil - 3. Sparkplug - 4. Low tension terminal - 5. Tail lamp 16V-3W - (. STOP light - 6V-3W) - 7. Main switch - 8. Speedometer bulb (6V-0.6W) - 9. Double filament bulb (6V25/25W) - 10. Pilot light 6V-3W - 11. Horn - 12. STOP light switch - 13. Inside view of head lamp - 14. Black - 15. Red - 16. Grey - 17. Black-yellow - 18. Yellow - 19. White - 20. Sky blue - 21. Green - 22. Violet - 23. Brown.

WIRING

The electrical supply for illumination and horn is in a. c., fed directly from a 6 pole flywheel magneto (nominal voltage 6V), to the following groups

The **head lamp**, 0 115 mm (4.5"), installed in the handlebars, has a 25/25W double filament bulb (main and dipped beam), and with a 3 W bulb (pilot light and parking light).

The **tail lamp**, with red reflector, has a 3 W bulb which also illuminates the number plate and a 3 W bulb for the STOP light.

Horn

A 0,6 W bulb is provided for illuminating the speedometer dial. The light and dip **switch** unit, with two levers is installed on the right hand side of the handlebars (see Fig. 11) ; one of the control levers has three positions:

- pilot light, tail lamp and speedometer bulb on;
- lights off;
- head lamp, tail lamp and speedometer bulb on;

the other one gives the two lighting conditions of the head lamp (main and dipped beam). The switch has also two push buttons for cut-out and horn respectively.

TOOL KIT

1 four-ended box wrench (11-14-21-22 mm) ; 2 double open-ended wrenches (11 - 14 and 7-10 mm) ; 1 single open-ended wrench (8 mm) ; 1 screwdriver. These tools are contained in a canvas roll which is placed in the left wing together with this booklet and the test card.

ACCESSORIES

On request the Vespa 150 can be equipped with following accessories:

Rear saddle of the nose pivoted, sprung type, to be secured to three chassis holes after removing the luggage rack. The central spring is adjustable to the driver's weight.

A foam rubber **pillion seat** can be used instead of the rear saddle. The seat can be secured to the rear luggage rack of the scooter. Both rear saddle and foam rubber seat are small and attractive looking and give remarkable comfort to the passenger, thus:: completing the efficiency of suspension (see Fig. 13).

Spare wheel and bracket. The wheel can be secured in two ways to the scooter:

- a. in front, by a light alloy bracket secured to the scooter longeron by means of two screws.
- b. at the rear, by a steel sheet pressing, provided with spacers, to be clamped onto the frame, under the luggage carrier or the rear saddle, by means of the three screws securing the latter.

A prompt re-starting of the scooter after a puncture is made possible by the spare wheel; the latter is held by either bracket in such a position where it is easily accessible and does not inconvenience the driver at all.

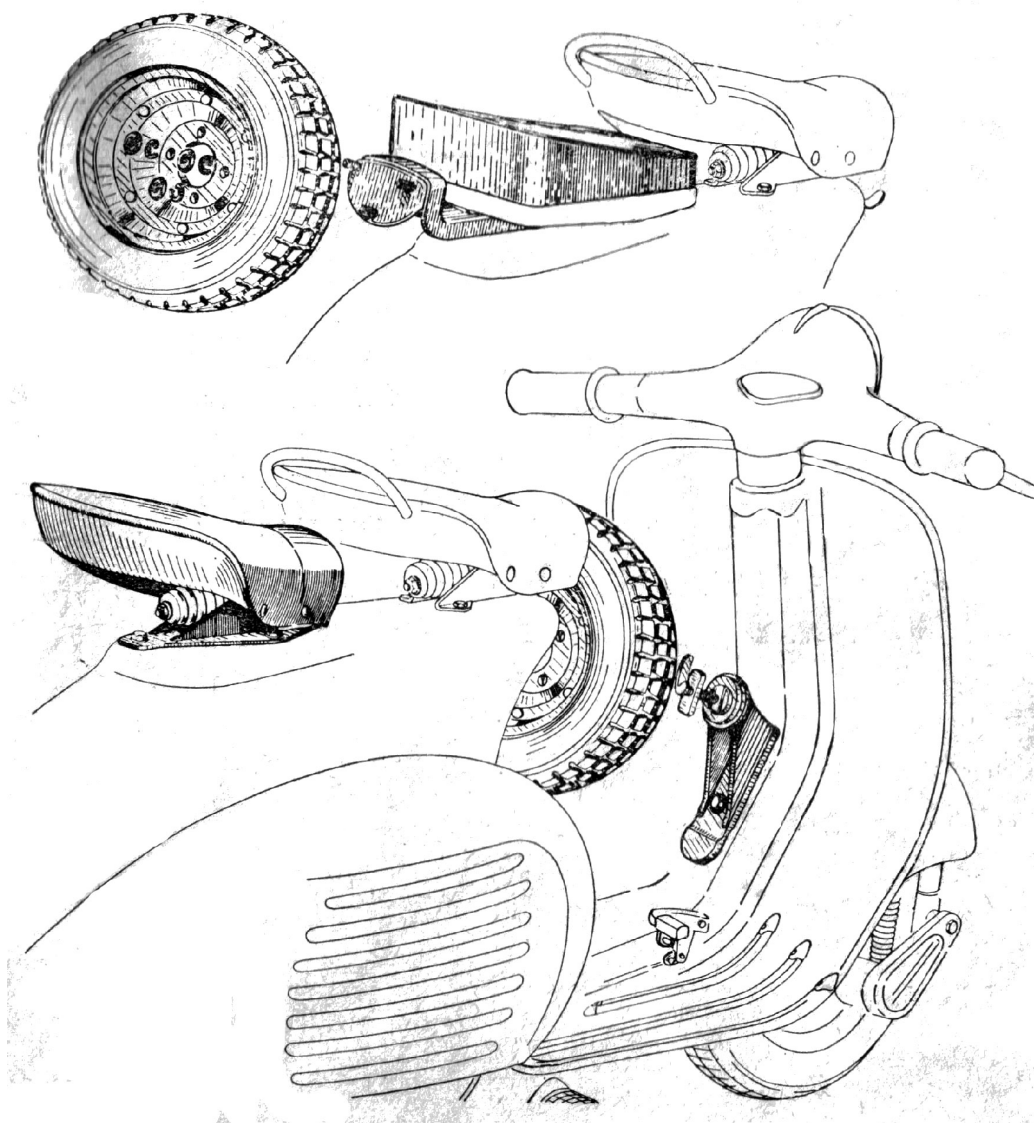


Fig. 13 – Pillion seat, spare wheel and bracket

Owing to the simple and rational design of the **Vespa** scooter, no particular experience is **required** for its operation, nor skilled personnel for its **maintenance**. The tasks can be carried out by any customer, even unexperienced, by following some general rules,

O P E R A T I O N

Fuel to be used during and after running-in should be a mixture of gasoline and oil, with 2% pure mineral oil ESSO SAE 30 i. e.: 20 cc of oil per liter of gasoline, or 1/4 pint per 11/2 gallon resp.

We recommend to use good quality, standard grade car gasoline, and to mix it with oil thoroughly. Keep the breather of filler cap clean.

Running-in. Important rules to be followed while running-in 2000 Km (1200 miles)

Do not exceed the following speeds:

1st gear:	20 Km/h (13 mph)
2nd gear:	30 Km/h (19 mph)
3rd gear:	40 Km/ /h (25 mph)
4th gear:	60 Km/h (37 mph)

- Do not hold these speeds for long periods neither use full throttle up-hill.
- Change oil in the gear box and check that nuts and bolts are not slack after the first 1000 Km (600 miles).
- Check that carburettor is well blocked on crankcase to avoid air infiltration.

Starting the engine. See (Fig. 14) the three positions of the tap: on, off, reserve.

Open fuel tap, put gear box in neutral (Fig. 14-15) and the throttle in slow running position, then depress the starting lever.

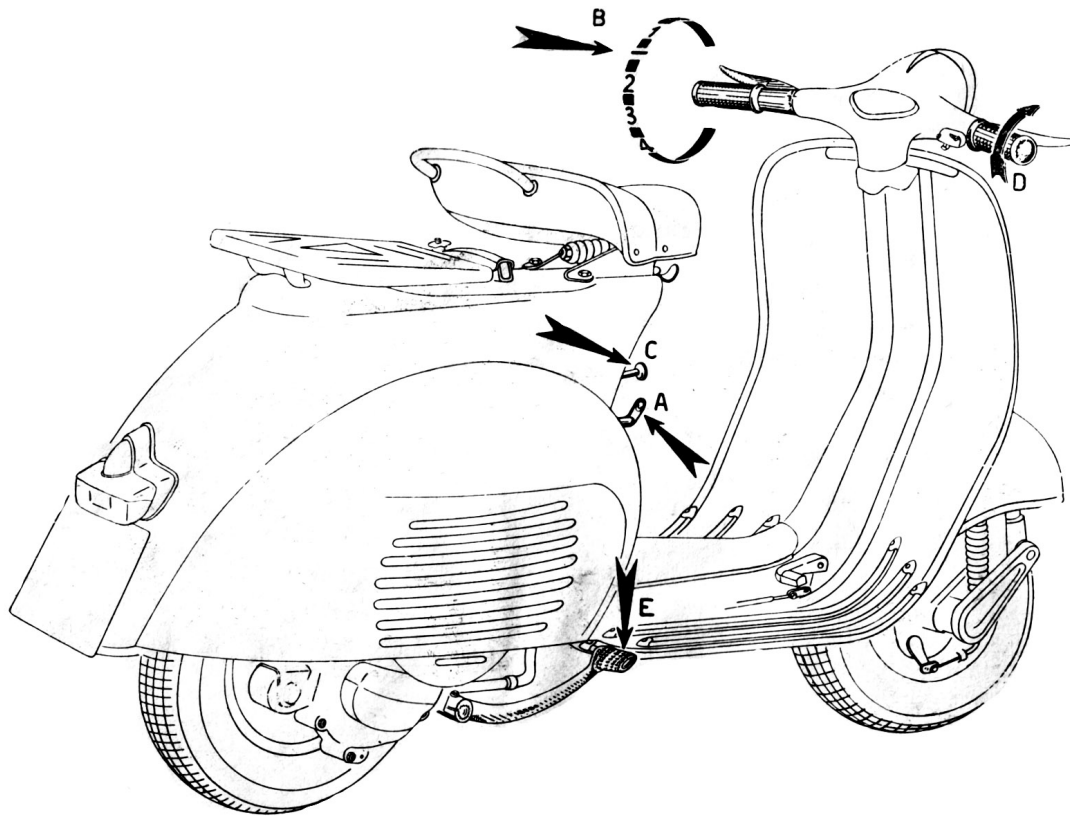
With cold engine, lift the starter device rod (lever "C" fig. 14). **With the throttle control twistgrip** in the position of minimum : under these conditions the starter device functions most efficiently. Do not use the starter device when the engine is warm. When the engine is running **the lever "C" must be brought to the normal position** so as to avoid rich carburation and consequent loss in performance, increased consumption etc.

In case of starting troubles due to engine being flooded (unvaporized fuel mixture in the cylinder, and combustion becomes therefore very difficult), proceed according to either one of following methods.

- Push-start the scooter: engage second gear, depress the clutch and push the machine to a certain speed; quickly release clutch lever and pull it back as soon as the engine fires.

- Close the fuel tap, remove sparkplug and action the engine by means of the kickstarter; wipe the plug dry and screw it back. Open the fuel tap and depress the starting lever.

Exercise care on re-assembling the sparking plug; start screwing it by hand at the proper angle to avoid damaging the cylinder; use the box wrench just for the last turns.



14 - Operations to carry out for starting the engine

A: open the fuel cock - B: select "neutral" c C: Pull out the starter device lever (with cold engine) - D: throttle control grip in idling position c E: depress the kickstarter.

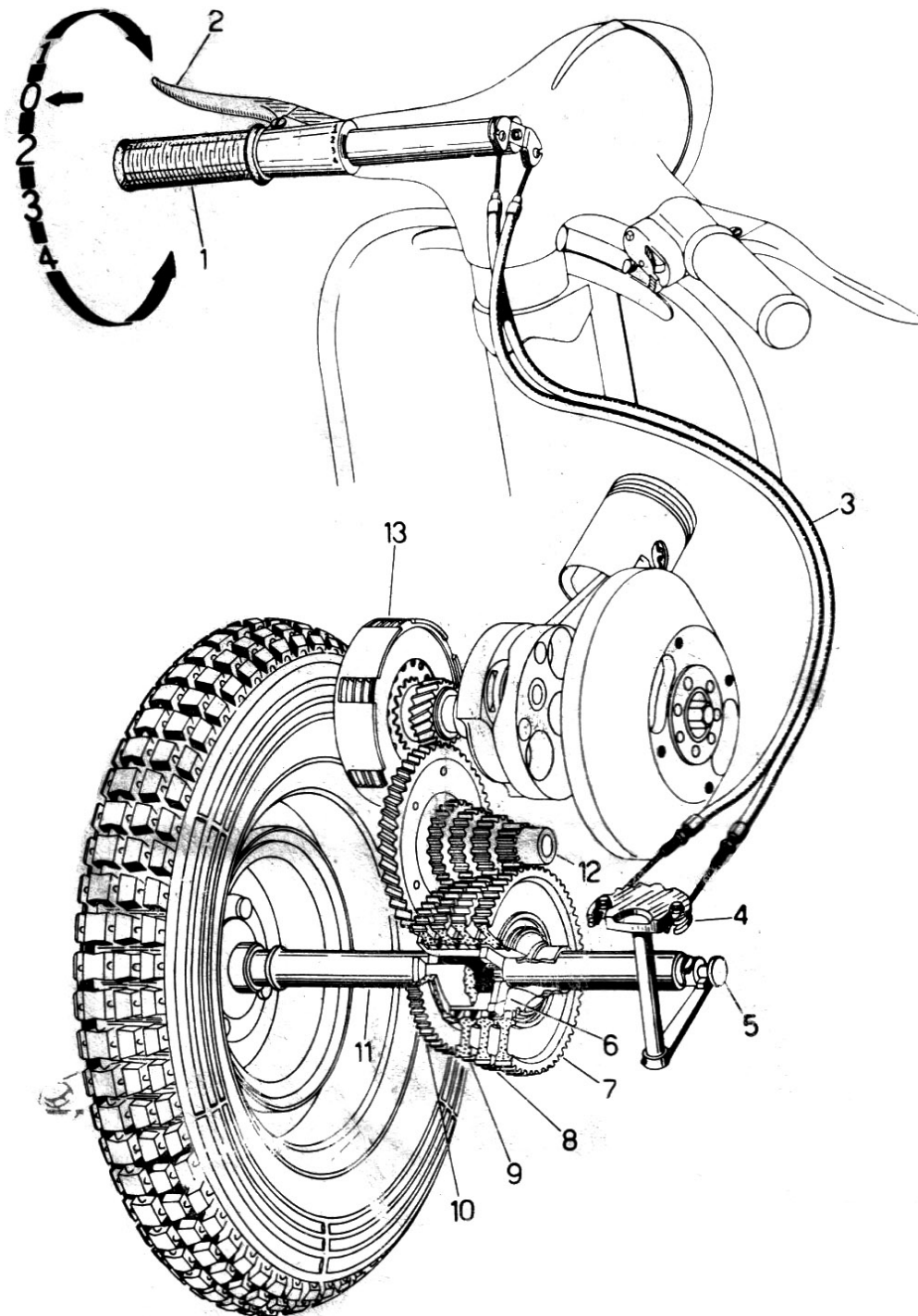


Fig. 15 - Drive system

1. Gear change twistgrip c 2. Clutch control lever c 3. Gear change control cables c 4. Gear shifter c 5. Selector stem c 6. Selector - 7. 1st gear pinion c 8. 2nd gear pinion c 9. 3rd gear pinion c 10. 4th gear pinion c 11. Mainshaft c 12. Cush gear c 13. Clutch.

N. B. - Positions 1-2-3-4 of the gear change twistgrip correspond to 1st 2nd, 3rd and 4th gear respectively; "0" indicates the neutral position.

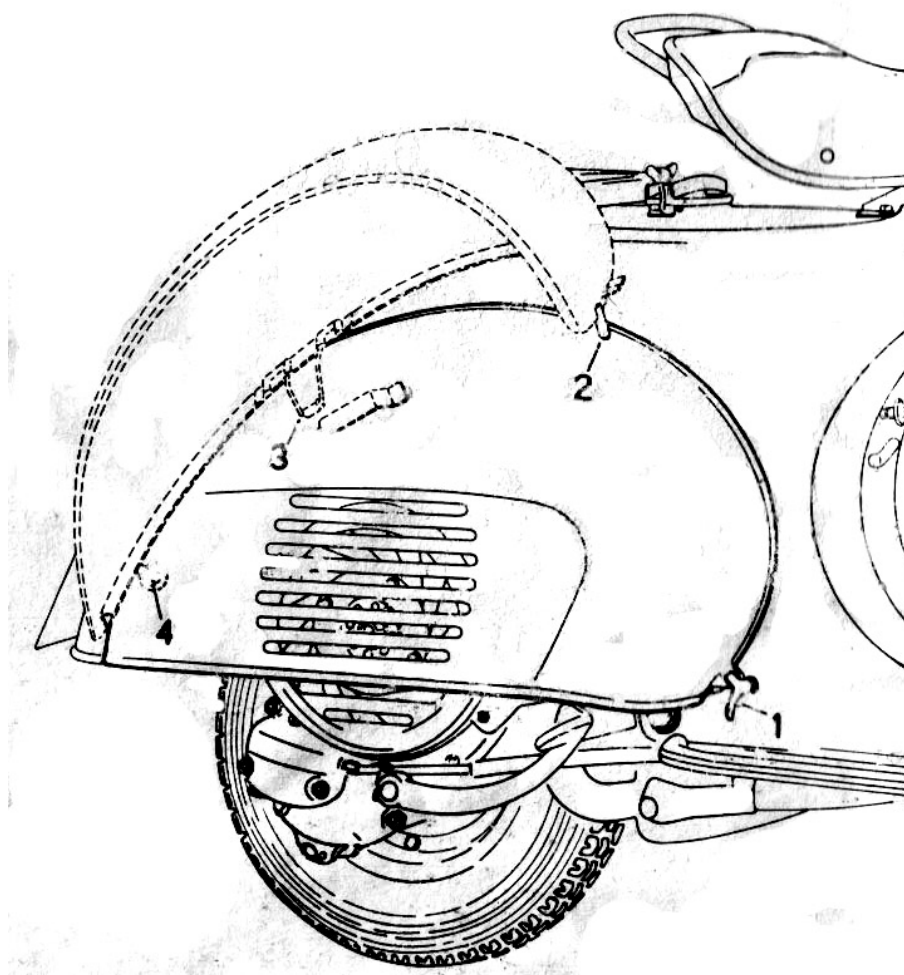


Fig. 16 - Engine bonnet removal

1. Engine bonnet blocking lever - 2. Front dowel - 3 Fixing hook - 4. Hooked pivot.

For access to the engine, take off the engine bonnet: proceed as follows.

- Pull the lever « 1 » (Fig. 16) and turn it so as to release it from the bonnet. Then move the bonnet slightly outwards, until front dowel « 2 » disengages from the hole on the frame.
- Push the bonnet from the front, upwards and turn (see position indicated by dotted line), thus releasing the fixing hook « 3 » from the frame.
- Move bonnet outwards round its hooked pivot « 4 » until the latter disengages from the hole on frame. The bonnet is thus removed.

For re-assembly, reverse the procedure.

Setting the machine in motion. Let the engine idle, lift the clutch and turn the gear change twistgrip (LH.) so that the line engraved on it coincides with the figure «1» (1st gear) engraved on handlebars (see Fig. 15). Now let in the clutch gently, while opening the throttle gradually to set the machine in motion.

Gear change. After reaching the required speed in 1st gear, quickly close the throttle, lift the clutch and turn the gear change twistgrip so that the engraved line is opposite figure « 2 » (2nd gear) ; let in the clutch and open the throttle. Repeat this procedure for changing into 3rd and 4th gear and for changing down. When you reduce the speed of your machine change down without delay. See the drive system on Fig. 15.

Do not turn the gear change twistgrip while the engine is not running.

As soon as gear change troubles arise, customers should have their machines adjusted by a Retailer or authorized service station.

Slow running adjustment. Idling revs can be raised or reduced respectively by simply tightening or slackening, either with a screwdriver or by hand, the knurled slotted screw on air cleaner steel sheet cover (see Fig. 6). The screw controls the throttle slide valve.

The adjuster screw for throttle control cable is installed on the air cleaner case (see Fig. 6). This screw is to be re-set only if necessary and on dismantling and re-assembling. Opposite to said screw on the air cleaner case, is a plugged hole for access to another screw (spring-loaded) with a tapering end (see Fig. 6). This screw controls the flow of carburated air through- the duct from the idling jet, and consequently the idling revs. We recommend that customers keep from resetting this screw, unless indispensables or during dismantling and assembling operations that should, be entrusted to a Service Station.

Stopping the engine. Push the earthing button; this will leave the cylinder full of fuel vapours, and the successive start will be easier.

Tyres. The wheels are interchangeable, i. e. they can be assembled either in front or rear, provided, that they are inflated to the pressures subsequently prescribed. For replacing a flat tyre, unscrew the four nuts which secure the wheel ; pull the latter sideways off the studs, repair the tube or fit on the spare wheel.

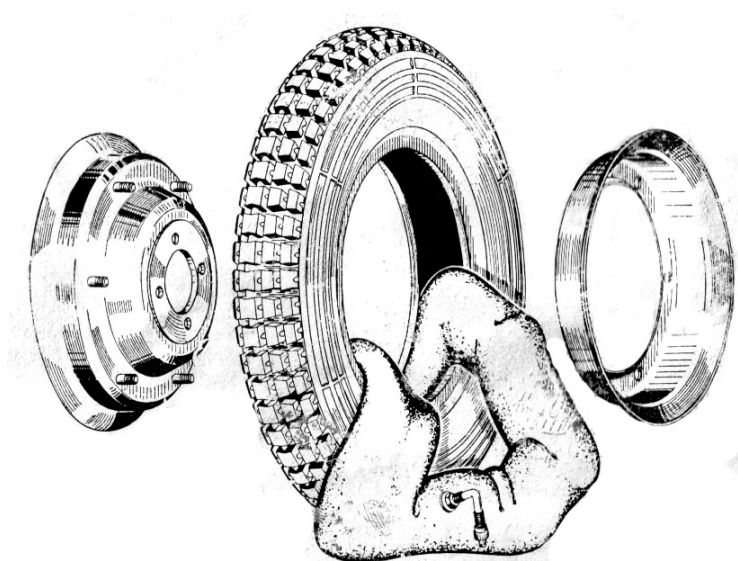


Fig. 17 – Removing the inner tube

Ensure that the spring washers are present when reassembling wheel: tighten nuts diagonally and evenly.

For removing the inner tube, first deflate it then unscrew the six nuts on the wheel, so that the two halves of the rim fall apart (see Fig. 17).

Tyre pressure should be 1.25t11.4 Kg/cm² (17.7t20 psi) on rear wheel, and 1 : 1 .1 Kg / cm² (14.2 t 15.6 psi) on front wheel. When the Vespa is ridden by two persons, the pressure of the rear tyre should be increased to 2t2.2 Kg/cm² (28.5-31.3 psi)

Brake adjustment. Brakes are properly adjusted if:

- the wheel rotates freely when control lever or pedal are in resting position.
- the braking action starts as soon as controls are operated. These conditions are obtained adjusting the cables by means of screws indicated with an arrow in Fig. 18.

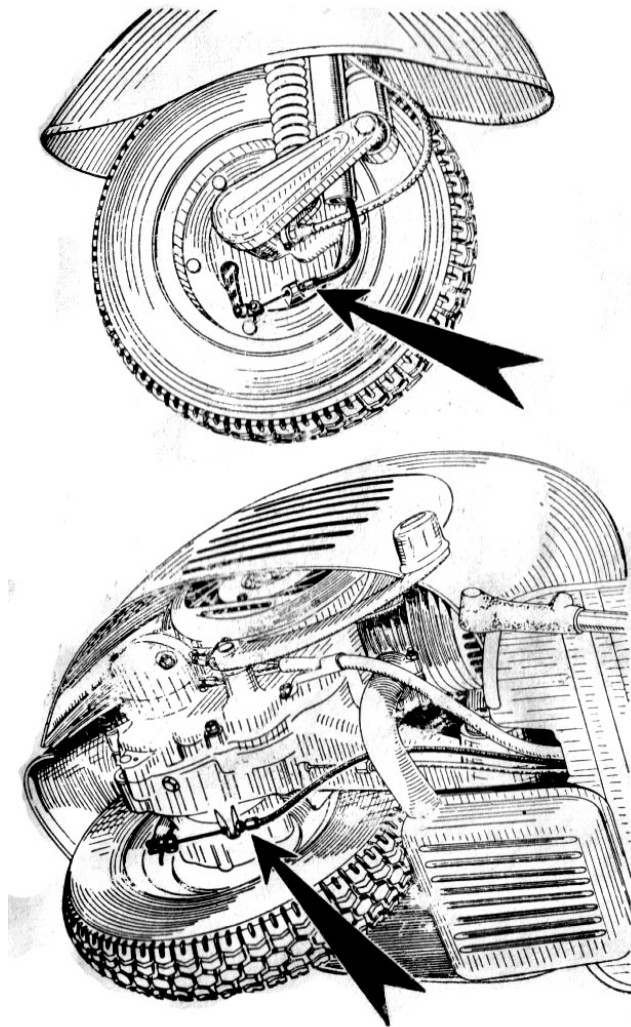


Fig. 18 – Brake adjustment

MAINTENANCE

Setting the head lamp. The correct orientation of the main beam can be obtained both horizontally and vertically as follows. Check that both front and rear tyres are inflated to 1 and 2.2 atm (14.2 and 31.3 psi) respectively.

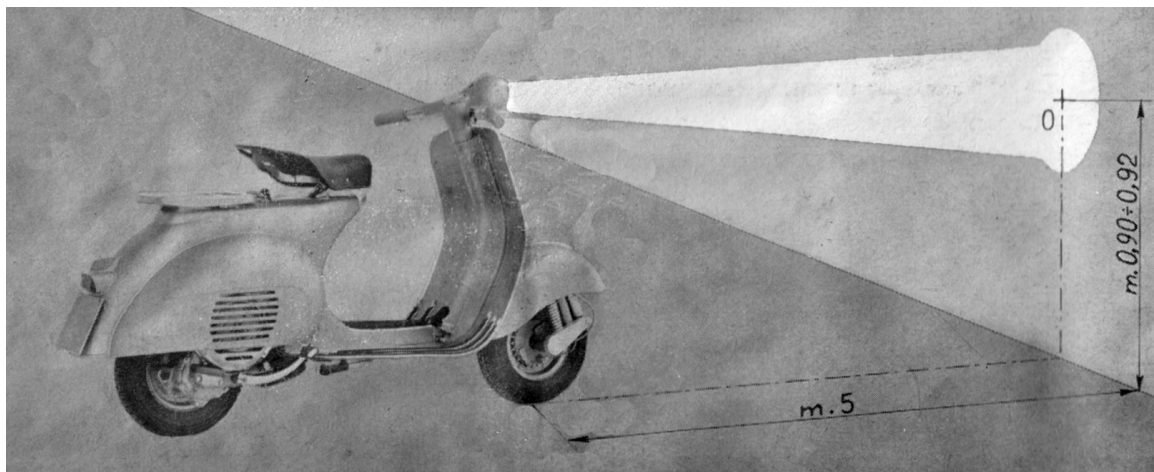


Fig. 19 - Adjustment of head lamp

N. B. - Dimension «0», corresponds to adjustment carried out with driver and passenger on the machine.

Place the scooter on a level floor in front of a white wall as seen on Fig. 19. Start the engine, hold the throttle control twistgrip at about $1 \frac{1}{3}$ and set the switch on « main beam ».

With two persons on the Vespa, slacken the two screws securing the head lamp, then move the latter as required in order that the beam axis coincides with point « 0 » on the wall.

Tighten the screws firmly.

This operation can be carried out also with the driver only sitting on the saddle. In this case, of course, the beam alignment should be altered whenever the scooter is being ridden by both driver and passenger.

Cleaning the scooter. Brushing with paraffin and wiping dry with clean rags is advisable for external cleaning of engine. All painted surfaces should be washed with water, cleaned using a sponge and wiped dry with chamois leather. Do not use paraffin on such surfaces as it damages paint and turns it dull. If necessary, blow the head lamp reflector clean wipe off dust with a very soft feather duster. Do not use a cloth and keep Fingers of fthe reflector surface.

Before setting the machine in motion

Check oil level in gear box by unscrewing from the crankcase, the level screw marked « OLIO » (see Fig. 21, No. 1). With the scooter standing upright, oil should just be about to flow out.

After the first 1000 Km (600 miles)

Warm up the engine and drain off all oil through the hole provided. Pour some fresh oil in and run the engine for a few seconds. Drain again and refill with about 0.18 Kg (0.4 lbs) of ESSO MOTOR -OIL 30.

See also page 20.

Every 4000 Km (2500 miles)

- 1) - Remove the air cleaner from the carburettor and agitate in a 30`', oil-gasoline bath.
- 2) - Check oil level in the gear box.
- 3) - Clean the lubricators of front wheel hub and refill them using a grease gun.
- 4) - Grease joints on brake controls.
- 5) - Grease the felt which lubricates the of flywheel magneto.
- 6) - Clean the sparkplug electrodes with a metal brush or very fine emery cloth, and adjust the gap to 0.6 mm (0.023 in).

Inspect the insulation material of sparkplug, replace if the porcelain is cracked. Wash with neat gasoline.

Use the type sparkplug prescribed by the Company. We remind owners that the use of an approved sparkplug will prevent many engine troubles.

- 7) - Lubricate the speedometer drive pinion and flex drive.

All operations indicated hereunder should be carried out by authorized Service Stations.

- 8) - Clean the muffler exhaust pipe and decarbonize the engine as explained in following notes. Remove the muffler, the cooling hood, the cylinder head and cylinder. Decarbonize the piston crown, the cylinder ports and the inner side of the cylinder head. Carefully clear the cylinder of carbon deposits.

Heat the exhaust pipe of the muffler, and clean it either by scraping it internally with a hooked wire or blowing air through from the opposite end; in both cases the muffler should be held so that the exhaust pipe is pointing downwards.

Every 8000 Km (5000 miles)

1) - Clean the breaker points.

In order to avoid ignition troubles or abnormal running, have the breaker points adjusted at a service station: the gap (see Fig. 20, " A ") should be 0.3 - 0.5 mm (0.011 " to 0.019"), and the points should begin to open when the current in the primary ignition circuit has reached its peak value.

2) - Lubricate the control cables and the gear shifter.

3) - Change the oil in the gear box (see page 29).

4) - In case of damper troubles contact your authorised service station.

Laying up. In this case, proceed as follows.

1. Clean the scooter thoroughly (see page 29).

2. With engine not running, rotate the throttle control twistgrip to its fullest extent, then pump 40 cc. (2.5 cu.in) of Esso SAE 30, by means of an oil can into the carburettor intake through the hole (see fig. 6 on the air cleaner cover. Depress the kick-starter three or four times.

3. Support the chassis of the machine on two wooden blocks ensuring that the tyres are clear of the ground.

4. Empty the fuel tank.

5. Grease all unpainted metal parts.

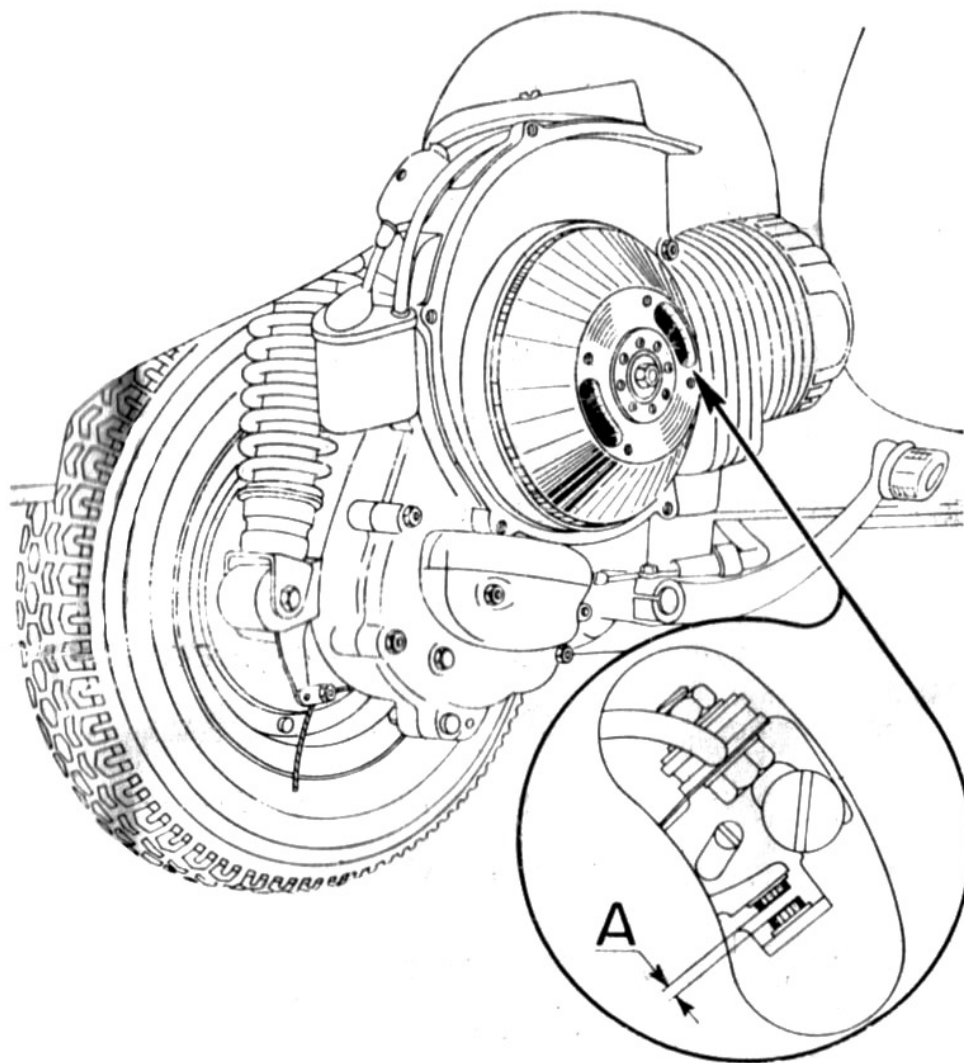


Fig. 20 - Breaker points. - A - Max gap: 0.3 - 0.5 mm (0.011-0.019")

LUBRICATION CHART

PARTS TO BE LUBRICATED

TYPE OF LUBRICANT

Every 4000 Km (2500 miles)

Gear box (Top up oil level)

Esso Motor Oil 30

Brake levers

Esso Multi purpose Grease H

Front suspension

“”

Felt of the flywheel cam

“”

Speedometer flex drive and pinion

“”

Every 8000 Km (5000 miles)

Gear box (Change the oil completely)

Esso Motor Oil 30

Gear shifter Control cable

Esso Multi purpose Grease H

Every petrol refill

Engine (lubricated by oil in the fuel mixture)

Mixture at 2% pure mineral oil
ESSO SAE30.
20Cc of oil per liter of gasoline (¼
pint per 1½ gals. Respectively).

Shock absorbers: only when not working efficiently

Esso Univis

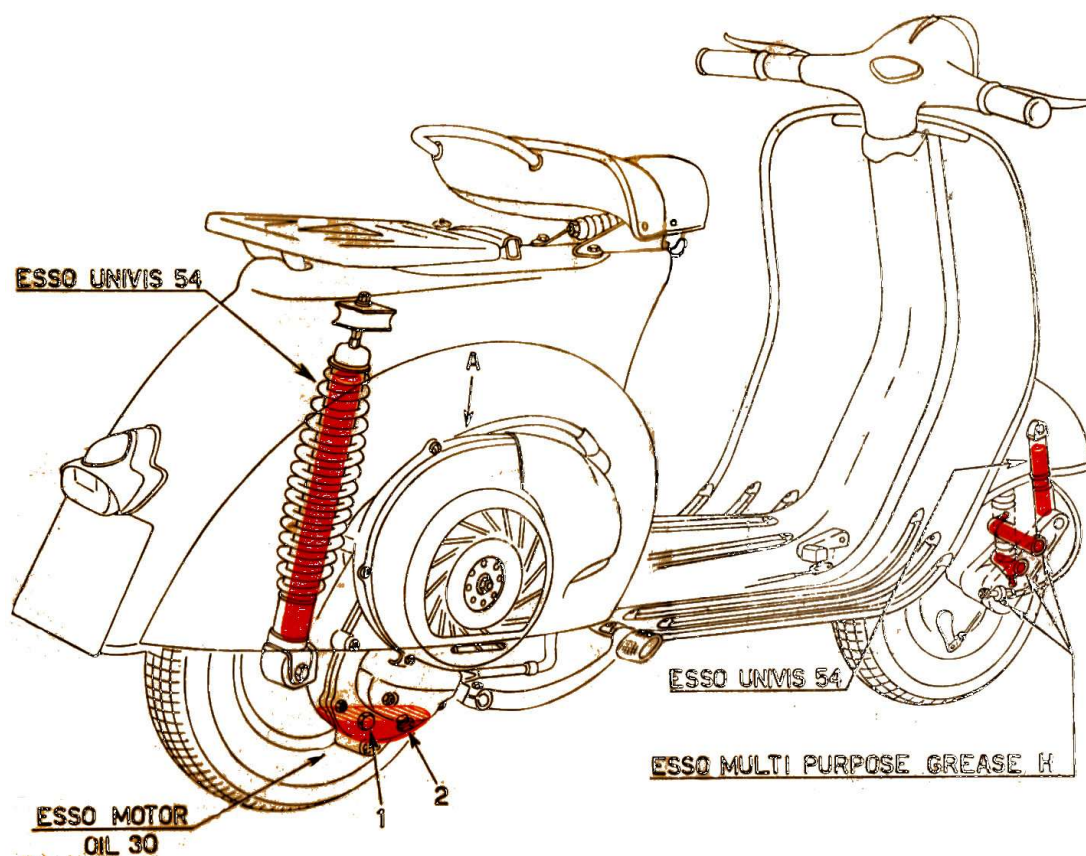


Fig. 21 – Lubrication scheme

A: engine lubricated by fuel mixture – 1.: filling hole – 2.: draining hole

FAULT FINDING

When the machine does not run properly, make all inspections and rectifications as explained below.

If the suggested remedies are not sufficient to eliminate the trouble, the customer should not try to carry out operations pertaining to the retailers, who have the necessary facilities to undertake this work.

Locating the trouble

Remedies

HARD STARTING

1. - Fuel system - Carburation

Fuel tank empty

turn to « reserve ». Refill as soon as possible.

Filter on carburettor dirty

Fuel tap body dirty

Carburettor body dirty

Jets

Remove and wash in gasoline.

Blow dry

Engine flooding

See page 24.

Air cleaner choked or dirty

See page 30, No. 1

2. - Ignition

Disconnect the plug lead. Check if sparking occurs between lead and crankcase when the kickstarter is operated.

Spark plug dirty

Clean (see page 30, No. 6). correct gap to 0.6 mm (0.023").

Porcelain of spark plug cracked

Replace the plug (see a « Notice », page 25, and page 30).

Breaker points dirty, worn or pitted; gap between breaker points incorrect

Ask the Retailer either to have them cleaned (with very fine emery paper or suitable files), or replaced, or to have gap adjusted.

INCORRECT RUNNING

1. - Lack of power

Muffler outlet pipe carbonised

Clean (see page 31).

Sparkplug not well screwed into cylinder head

Tighten with 21 mm box wrench.

Cylinder head not fitting properly into spigot on top of cylinder

Set the head properly and tighten the nuts uniformly

2. - Explosions at muffler and carburettor

Replace or clean the plug and correct the gap (see page 30, No. 6) to 0.6 mm (0.023 in).

3. - High fuel consumption

a) Air cleaner choked or dirty; starter device rod sticking in closed or partially closed position.

Clean with pure gasoline and blow Dry. Dip the filter into a 30% gasoline-oil bath. Release and lubricate starter device control lever.

b) Other troubles (faulty carburettor, poor cc m-pression, etc.)

See your Retailer

4. - Engine noisy - Clutch troubles - Gear pinions disengage of own accord - Starter assembly not engaging - Controls not operating properly - Steering column becomes stiff - Inefficiency of suspensions.

See your Retailer

5. - Poor braking

Stroke of pedal or lever too long
Brake linings oily or worn down

Adjust (see Fig. 18, page 27).
Wash with gasoline and dry in air, or replace. See your Retailer about oil leakage

Brake drums and linings scratched

Replace

6. - Faulty electric wiring

Lead terminals loose or wrongly connected

Re-connect properly (see Figs. 11-12) or replace and tighten the screws.

Incorrect adjustment of the head lamp

Re-set properly (see page 28).